

What is claimed is:

1. A disk cartridge or housing comprising:

a case housing an information recording and/or reproduction disk and a shutter which is installed on the case and selectively opened and closed to accomplish an access to the disk by a recording and/or reproduction apparatus, and a protrusion group having a plurality of protrusions each protruding toward the disk and formed on an inner wall of at least one of the case and the shutter.

2. The disk cartridge or housing of claim 1, wherein the protrusion group comprises a plurality of protrusions repeating at a predetermined interval in a predetermined pattern.

3. The disk cartridge or housing of claim 1, wherein each of the protrusions stretches linearly in a radial direction of the disk.

4. The disk cartridge or housing of claim 1, wherein the protrusion group is disposed at a plurality of places at an equiangular interval in a direction of rotation of the disk.

5. The disk cartridge or housing of claim 1, wherein the protrusion group comprises protrusion groups arranged in a stepped manner in a radial direction of the disk.

6. A disk cartridge or housing comprising:

a case housing an information recording and/or reproduction disk and a shutter which is installed on the case and selectively opened and closed to accomplish an access to the disk by a recording and/or reproduction apparatus, and a protrusion group having a plurality of protrusions each protruding toward the disk and rotatably formed within the case .

7. The disk cartridge or housing according to claim 6, wherein the protrusion group is selectively positioned between a first position so that the protrusions are located in a region over and under the disk and a second position so that the protrusions are isolated from the region over and under the disk.

8. The disk cartridge or housing of claim 7, further comprising a driving apparatus rotating the protrusion group.

9. The disk cartridge or housing of claim 7, wherein the protrusion group comprises a plurality of protrusions repeating at a predetermined interval in a predetermined pattern.

10. The disk cartridge or housing of claim 7, wherein each of the protrusions stretches linearly in a radial direction of the disk.

11. The disk cartridge or housing of claim 7, wherein the protrusion group is disposed at a plurality of places at an equiangular interval in a direction of rotation of the disk.

12. The disk cartridge or housing of claim 7, wherein the protrusion group comprises protrusion groups arranged in a stepped manner in the radial direction of the disk.

13. A disk cartridge or housing comprising:
a case housing an information recording and/or reproduction disk and a shutter which is installed on the case and selectively opened and closed to accomplish an access to the disk by a recording and/or reproduction apparatus, wherein a protrusion group having a plurality of protrusions each protruding toward the disk is formed within the case so as to ascend or descend.

14. The disk cartridge or housing according to claim 13, wherein the protrusion group is selectively positioned between a first position so that the protrusions are located in a region over and under the disk and a second position so that the protrusions are isolated from the region over and under the disk.

15. The disk cartridge or housing of claim 14, further comprising a driving apparatus elevating the protrusion group.

16. The disk cartridge or housing of claim 14, wherein the protrusion group comprises a plurality of protrusions repeating at a predetermined interval in a predetermined pattern.

17. The disk cartridge or housing of claim 14, wherein each of the protrusions stretches linearly in a radial direction of the disk.

18. The disk cartridge or housing of claim 14, wherein the protrusion group is disposed at a plurality of places at an equiangular interval in a direction of rotation of the disk.

19. The disk cartridge or housing of claim 14, wherein the protrusion group comprises protrusion groups arranged in a stepped manner in a radial direction of the disk.

20. A disk recording and/or reproduction apparatus recording information on or reproducing information from a disk while rotating the disk loaded within a housing, wherein a protrusion group having a plurality of protrusions each protruding toward the disk is rotatably formed within the housing .

21. The disk recording and/or reproduction apparatus according to claim 20, wherein the protrusion group is positioned so that the plurality of protrusions are located in a region over and under the disk or isolated from the region over and under the disk.

22. The disk recording and/or reproduction apparatus of claim 21, further comprising a driving apparatus rotating the protrusion group.

23. The disk recording and/or reproduction apparatus of claim 21, wherein the protrusion group has a structure in which the plurality of protrusions repeat at a predetermined interval in a predetermined pattern.

24. The disk recording and/or reproduction apparatus of claim 21, wherein each of the protrusions stretches linearly in the radial direction of the disk.

25. The recording and/or reproduction apparatus of claim 21, wherein the protrusion group is disposed at a plurality of places at an equiangular interval in the direction of the rotation of the disk.

26. The disk recording and/or reproduction apparatus of claim 21, wherein the protrusion group has a structure in which protrusion groups are arranged in a stepped manner in the radial direction of the disk.

27. A disk recording and/or reproduction apparatus recording information on or reproducing information from a disk while rotating the disk loaded within a housing, wherein a protrusion group having a plurality of protrusions each protruding toward the disk is formed within the house so as to ascend or descend.

28. A disk recording and/or reproducing apparatus according to claim 27, wherein the protrusion group is selectively positioned between a first position so that the plurality of protrusions are located in a region directly over and under the disk and a second position so that the plurality of protrusions are isolated from the region directly over and under the disk.

29. The disk recording and/or reproduction apparatus of claim 28, further comprising a driving apparatus elevating the protrusion group.

30. The disk recording and/or reproduction apparatus of claim 28, wherein the protrusion group has a structure in which the plurality of protrusions repeat at a predetermined interval in a predetermined pattern.

31. The disk recording and/or reproduction apparatus of claim 28, wherein each of the protrusions stretches linearly in the radial direction of the disk.

32. The disk recording and/or reproduction apparatus of claim 28, wherein the protrusion group is disposed at a plurality of places at an equiangular interval in the direction of the rotation of the disk.

33. The disk recording and/or reproduction apparatus of claim 28, wherein the protrusion group has a structure in which protrusion groups are arranged in a stepped manner in the radial direction of the disk.

34. A disk cartridge having an information recording and/or reproducing disk comprising:
a case enclosing the disk; and
at least one protrusion group having a plurality of protrusions each protruding toward the disk and formed within said case.

35. The disk cartridge according to claim 34, wherein the protrusion group is moveable within said case.

36. The disk cartridge according to claim 35, further comprising:
a solenoid driving the movement of the protrusion group.

37. The disk cartridge according to claim 35, wherein the protrusion group is formed on a lever pivotal around a rotation axis.

38. The disk cartridge according to claim 35, further comprising a guiderail along which the protrusion group is moveable.

39. The disk cartridge according to claim 34, wherein the plurality of protrusions are positioned linearly in the radial direction of the disk and adjacent to each other such that they form a sine curve shape configuration.

40. The disk cartridge according to claim 34, wherein the plurality of protrusions are positioned linearly in the radial direction of the disk and adjacent to each other such that they form a saw tooth shape configuration.

41. The disk cartridge according to claim 34, wherein the protrusion group comprises several protrusion parts arranged in a radial direction of the disk in a stepped manner.

42. The disk cartridge according to claim 36, wherein the protrusion group is moveable in a plurality of positions at an equiangular interval in a direction of rotation of the disk.

43. The disk cartridge according to claim 34, further comprising:
foreign material filters positioned within said case.

44. A disk recording/reproducing apparatus for recording information on or reproducing information from a disk while rotating the disk, comprising:
a housing; and
a protrusion group having a plurality of protrusions each protruding toward the disk and formed within the housing.

45. A disk recording/reproducing apparatus according to claim 44, wherein said protrusion group is moveable within said housing.